

## WHAT IS CLAIMED IS:

1. A biological fluid processing set comprising:  
at least two flexible containers suitable for containing a biological fluid, the containers including ports allowing biological fluid in and out of the containers; and  
a complement filter, wherein said complement filter is arranged within a first of the at least two containers to deplete complement from the biological fluid contained in the first container.
2. The biological fluid processing set of claim 1, for use in apheresis further comprising a second complement filter, wherein said second complement filter is arranged within a second of the at least two containers to deplete complement from the biological fluid contained in the second container.
3. The biological fluid processing set of claim 1, wherein said complement filter is arranged within the first container to deplete complement from the biological fluid without passing the biological fluid along a substantially defined fluid flow path through the complement filter.
4. The biological fluid processing set of claim 2, wherein said first and second complement filters are arranged within said first and second containers, respectively, to deplete complement from the biological fluid without passing the biological fluid along a substantially defined fluid flow path through the complement filters.
5. The biological fluid processing set of claim 1, wherein at least a portion of the complement filter is secured to the first container.
6. The biological fluid processing set of claim 5, wherein a portion of the complement filter is secured to an inner wall of the first container.
7. The biological fluid processing set of claim 1, wherein the complement filter is tethered to the first container.
8. The biological fluid processing set of claim 1, wherein the complement filter is not secured to the first container.

9. The biological fluid processing set of claim 5, wherein a portion of the complement filter is secured in a side seal of the first container.
10. The biological fluid processing set of claim 1, wherein at least one of the flexible containers comprises a blood bag.
11. The biological fluid processing set of claim 1, wherein the complement filter comprises a porous polymeric surface-modified membrane having a negative zeta potential at physiological pH.
12. The biological fluid processing set of claim 11, wherein the membrane has carboxyl groups bound to the surface of the membrane.
13. The biological fluid processing set of claim 1, wherein the complement filter comprises a porous polymeric surface-modified membrane having anionic groups bound to the surface of the membrane.
14. The biological fluid processing set of claim 11, wherein the membrane has a pore size of about 2  $\mu\text{m}$  or less.
15. The biological fluid processing set of claim 11, wherein the membrane has a pore size of about 1  $\mu\text{m}$  or less.
16. A method of processing biological fluid comprising:
  - passing a biological fluid comprising apheresis platelets into one or more containers, at least one of the containers comprising a complement filter capable of depleting complement from the biological fluid comprising apheresis platelets;
  - contacting the complement filter with the biological fluid comprising apheresis platelets; and
  - removing complement from the biological fluid comprising apheresis platelets.
17. The method of claim 16, including passing biological fluid comprising apheresis platelets into a first container, the first container comprising a first complement filter and passing biological fluid comprising apheresis platelets into a second container, the

second container comprising a second complement filter, contacting the complement filter in each container with the biological fluid comprising apheresis platelets and removing complement from the biological fluid comprising apheresis platelets in each container.

18. The method of claim 17, including passing the biological fluid comprising apheresis platelets into the first container and passing at least a portion of the biological fluid comprising apheresis platelets in the first container into the second container.

19. The method of claim 16, including storing the biological fluid comprising apheresis platelets in a container comprising a complement filter for a storage period of at least about 24 hours and moving the biological fluid comprising apheresis platelets within the container during at least part of the storage period.

20. The method of claim 17, including storing biological fluid comprising apheresis platelets in the first container comprising a complement filter and storing biological fluid comprising apheresis platelets in the second container comprising a complement filter for a storage period of at least about 24 hours and moving the biological fluid comprising apheresis platelets within the first and second containers during at least part of the storage period.

21. The method of claim 16, wherein removing complement from the biological fluid comprising apheresis platelets includes removing C3a from the biological fluid comprising apheresis platelets.

22. The method of claim 16, wherein the complement filter is arranged within a container to contact the biological fluid comprising apheresis platelets passed into the container without directing substantially all of the biological fluid comprising apheresis platelets through the complement filter as the biological fluid comprising apheresis platelets is passed into the container.

23. The method of claim 21, wherein removing complement from the biological fluid comprising apheresis platelets includes removing at least about 60% of C3a from the biological fluid comprising apheresis platelets during a storage period of at least about 24 hours.

24. The method of claim 16, wherein the complement filter comprises a porous polymeric surface-modified membrane having a negative zeta potential at physiological pH.

25. The method of claim 16, wherein the apheresis platelets are leukocyte-depleted apheresis platelets.